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# MONTANA WATER PLAN

## Management Section

**REVISED DRAFT**

1988

### Subsection: Federal Hydropower Licensing and State Water Rights

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WATER RESOURCES DIVISION • DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

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## INTRODUCTION

Since 1920, the Federal Power Act (FPA) (16 USC 791(1982)) has required the Federal Energy Regulatory Commission (FERC) to license any hydropower project that: (1) is located on federal land; (2) uses water impounded by a federal dam; (3) is located in, or uses water from a navigable stream; or (4) produces power which affects interstate commerce. Following the U.S. Supreme Court decision in First Iowa Hydro-Electric Cooperative v. Federal Power Commission, 328 U.S. 152 (1946), FERC is not bound by state laws or policy in determining the number and location of hydropower projects it may license within a state. Not only does FERC's authority to site hydropower dams preempt all state decision-making on the issue, but FERC contends it is not required to consider Montana's water law system of prior appropriation. This relationship between FERC and the state has frustrated the state's attempt to manage its water resources by: (1) not allowing the state to optimize water use when a hydropower project virtually forecloses all future upstream uses; and (2) eroding the state's authority to control the allocation and use of its water.

## BACKGROUND

In 1920, when almost one-third of the United States' energy needs were supplied by hydropower, Congress enacted the Federal Water Power Act in response to fears that the hydropower industry could be concentrated in the hands of a few major power companies. The law was amended in 1935 to become the Federal Power Act (FPA) and is administered by the Federal Energy Regulatory Commission. In passing the FPA, Congress seemed to create a balance between state and federal governments in authorizing hydropower projects. The FPA required a license from FERC, but also provided for the application of state water law. However, in its First Iowa decision, the U.S. Supreme Court held that a hydropower project could be federally licensed even though the applicant was in violation of Iowa laws that required a state permit to build a dam and prohibited the dewatering of a stream. The Court's decision was based on grounds that a state license, as a condition precedent to federal action, would: (1) give the states veto power over projects that Congress intended FERC to regulate; (2) allow the states to control the comprehensive planning that congress entrusted to FERC; (3) result in a duplicate system of federal and state licensing that would be unworkable; and (4) make FERC the agent of the states for purposes of enforcing state laws.

Based on First Iowa and subsequent decisions, FERC's position is clear: an applicant for a federal hydropower license does not have to acquire a state water right prior to issuance of the license. In addition, the license may contain a special article allowing additional time to acquire the state water rights necessary to operate the project. If a federal license is issued, the licensee acquires the federal power of eminent domain and may condemn existing rights to acquire water for the project, provided that the right-holder is compensated. Thus, a FERC licensee can be inserted into the water rights system without ever having to comply with state water laws.

The Montana Constitution provides that all waters in the state are the property of the state for the use of its people and are subject to appropriation as provided by law for all beneficial uses, including hydropower. Since passage of the Montana Water Use Act of 1973, an appropriation of water requires a permit from the Department of Natural Resources and Conservation. Disruption of this appropriation system of water rights is only the most obvious and fundamental effect for FERC's disregard of state policies, procedures, and laws. Under the provisions of the Federal Fish and Wildlife Coordination Act and the Electric Consumers Protection Act, FERC must consult with state and federal fish and wildlife agencies when considering the issuance of a federal license (or exemption from licensing) for a proposed hydropower project. In many instances, this consultation leads to the imposition of minimum instream flow requirements on a project's federal license, often in disregard of state water law. Another problem centers on the fact that some hydropower projects may require a large share of the available flow at a certain point on a river. If FERC licenses a project and hasn't fully considered the range of state water management objectives, it may foreclose future agricultural, municipal, and other consumptive water uses upstream from the licensed project.

As demand increases for Montana's limited water supplies, the role of the state in controlling the allocation and management of this resource becomes more critical. Because of its knowledge of existing water use and water availability, the state is in the best position to exercise water management authority, but is frustrated by asserted federal preemption of this authority in regard to FERC hydropower licensing. Therefore, the state wishes to: (1) assure that FERC licensing and relicensing decisions are consistent with state resource management decisions, including the appropriation of water, the siting of hydropower and associated facilities, protection of fish and wildlife, and maintenance of water quality; (2) maximize

state influence on hydropower development in Montana while acknowledging a federal interest in coordinating such development throughout the region; (3) assure that FERC decisions comply with Montana's comprehensive water plans; and (4) guarantee that Montana's water rights system is fully considered in FERC decisions regarding water allocation.

## **STATE WATER PLAN POLICY STATEMENT**

Montana must seek to maximize control over the management of its water resources in matters pertaining to the siting of hydropower generating facilities. Water management agencies as well as hydropower producers in Montana should, to the extent possible, pursue development of common positions when dealing with FERC and matters involving changes to the Federal Power Act.

## **ISSUE AND RECOMMENDATIONS**

### **Issue**

FERC decisions on the licensing of hydropower projects fail to reflect Montana's statutory prerogatives concerning the allocation and management of the state's water resources.

### **Recommendations Adopted by the State Water Plan Advisory Council**

A two-pronged approach for dealing with FERC and the federal process for licensing hydropower projects is recommended.

The first recommendation is to work within the federal hydropower licensing system to influence FERC decisions on the siting and operation of hydropower projects in Montana. This recommendation would entail a state consultation process that includes all concerned agencies and groups, and the hydropower developers. Under this process, applicants for a federal hydropower license would be advised of all state requirements regarding fish and wildlife effects, water quality certification, environmental impacts, water use permits, facility siting, and state water management goals. In addition, the consultation process would facilitate the project's review by state agencies and

minimize the conflicts when the application is submitted to FERC. Under this process, holders of existing hydropower licenses and other interested agencies and groups could also seek mutually acceptable means of resolving problems surrounding current operating facilities. Key among the issues that might be involved are fishery enhancement or upstream water development.

Through this approach, state agencies and the hydropower producers would work on the issues surrounding a project and the means to resolve any problems. In turn, it is expected that FERC would accept the conclusions of the Montana consultation process and condition the license accordingly. The process would be defined under the state water plan as the comprehensive analysis that will be submitted to FERC for consideration as required under the Electric Consumer's Protection Act. Each analysis could also be used for interventions in federal hydropower licensing proceedings.

The second recommendation is to pursue statutory changes to the federal hydropower licensing system to maximize state-level control over the allocation and management of Montana's waters. This would largely focus on amending the Federal Power Act. Potential amendments would: assure consultation of state agencies charged with energy facility siting; allow states to collect fees from hydropower license applicants in order to study the impacts of proposed projects; require FERC to defer to state water plans, unless there is an overriding national interest; ensure fish and wildlife protections as provided by the Electric Consumer's Protection Act are sustained; make compliance with state water law a condition of a federal hydropower license; and provide that a water right for a hydropower project can be obtained only in accordance with state law. Another proposed amendment would abolish or limit FERC's authority to license hydropower projects and correspondingly increase state-level authority.

As a final element of this option, the state would seek to change the federal licensing system by supporting litigation that has the potential to overturn the First Iowa decision of the U.S. Supreme Court.

### **Preliminary Recommendations Deleted by the State Water Plan Advisory Council**

None of the preliminary recommendations in this plan section were deleted by the State Water Plan Advisory Council.

## PLAN IMPLEMENTATION

### Legislative Action

No state legislative action is required.

### Administrative Action

A hydropower coordinating committee will be established to facilitate the recommended consultation process, and to develop and review proposals to amend the Federal Power Act or overturn the First Iowa decision. The

committee will be composed of representatives of water management agencies, hydropower producers, and key public interest groups.

### Financial Requirements and Funding Strategies

It is anticipated that the proposed administrative actions can be accommodated under current-level funding for the state water planning program. If new, detailed information is needed to intervene in a federal licensing proceeding, additional costs might be incurred.

#### Time Schedule

Activity	Responsibility	Deadline
A. Development and Implementation Tasks		
1. Establish coordinating committee (CC)	DNRC	March 1989
2. Develop state consultation process	DNRC and CC	June 1989
3. Define SWP process to analyze proposed hydropower projects	DNRC	September 1989
B. Ongoing Tasks		
1. Monitor FERC licensing activities	DNRC	
2. Intervene in FERC licensing proceedings	DNRC and CC	
3. Promote negotiations with appropriate hydropower licensees	DNRC	
4. Review proposed amendments to FPA for adequacy	DNRC	
5. Monitor congressional actions relating to FERC	DNRC	
6. Monitor all litigation related to FERC and state water management	DNRC	

# **MONTANA WATER PLAN Management Section**

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## INTRODUCTION

Agriculture is Montana's largest business, providing about one-third of the total state income from primary industries. Irrigation contributes roughly one-quarter of agricultural income and, importantly, stabilizes agricultural production during the all-too-frequent dry years. Satisfying agriculture's vital demand for irrigation water requires the development and extension of water supplies through a combination of management strategies, including water storage. Another method is to improve the efficiency with which water is used.

The benefits of improved agricultural water use efficiency are diverse and include:

1. Improved ability to withstand periods of drought.
2. Increased irrigated acreage through the use of saved water.
3. Improved performance of aging irrigation facilities.
4. Increased irrigators' profits when the benefits of more efficient water use (increased crop production and sometimes decreased operating costs) are greater than the investment cost.
5. Reduced soil erosion and improved water quality.
6. Help in meeting the needs of current water users once the prior reserved rights of Indian tribes and the federal government are quantified and put to use.

Along with these benefits, improving water use efficiency may be important in terms of interstate water allocation. The U.S. Supreme Court has indicated that state conservation efforts will be considered if it is called upon to divide the waters of interstate rivers. The Court could decide to award smaller shares to states making no effort to increase water use efficiency, reasoning that these states could meet their future needs by saving more water.

## BACKGROUND

Any strategy to improve agricultural water use efficiency must reflect an appreciation of several difficulties. First, because each irrigation situation is different, improving water use efficiency requires a case-by-case consideration of a number of complex geologic, hydrologic, and economic factors. Second, irrigation efficiency improvements can be very expensive. Third, water uses within a basin can be extremely interdependent. One irrigator's return flows or recharge to ground water can be another irrigator's water supply. Therefore, improving the effi-

ciency of one water user could adversely affect the water supply of others. Fourth, while Montana law protects water users from adverse effects caused by other people's changes in water use, the law does not clearly establish who owns the right to water saved without adverse effects to others.

A number of options are already available to overcome some of these problems. The Montana Cooperative Extension Service, local conservation districts, and a number of other state and federal agencies provide technical assistance and information on water conservation measures. The Montana University System also supports research to improve our understanding of the complex factors that affect irrigation efficiency. Research may also help develop improved irrigation practices and technologies.

Funding assistance is available for irrigation efficiency improvements from a number of sources. These sources include the U. S. Agricultural Stabilization and Conservation Service, Farmers Home Administration, Soil Conservation Service, and the Montana Water Development Program administered by the Department of Natural Resources and Conservation (DNRC).

Given that one irrigator's water losses can be another irrigator's water supply, improvements in water use efficiency may adversely affect some water users. In light of this, the law provides potentially affected parties the right to object to certain changes in water use. Accordingly, the objective of increased water use efficiency is not to reduce the amount of water that is later reused. Rather, it is to decrease losses such as: (1) water used by weeds or other unwanted vegetation; (2) evaporation of standing water; (3) water that is not consumed but becomes inaccessible for reuse; or (4) water that becomes unusable because its quality has deteriorated.

The final difficulty stems from the fact that our water law is not clear on the question of who holds the right to salvaged water. In Montana, water rights are based on the amount of water historically put to beneficial use. If an irrigator decreases his use over time because of improved efficiencies, the legal status of the water no longer needed can be called into question. By one interpretation, this part of the water right would be considered abandoned and the water would go to the next junior user. Obviously, this would not encourage increased efficiency. Under a second interpretation, an irrigator who increases his efficiency retains the right to the salvaged water, so long as other water users would not be adversely affected by the change in water use. The irrigator may then have the option to expand his irrigated acreage, sell, or otherwise benefit from the right to the salvaged water. Using this interpretation, an irrigator may be rewarded, rather than penalized, for becoming more efficient.

## STATE WATER PLAN POLICY STATEMENT

Voluntary improvements in agricultural water use efficiency that expand water supplies for agriculture and other uses should be encouraged. Where improvements in water use would adversely affect other existing beneficial uses, such improvements should not be allowed.

## ISSUES AND RECOMMENDATIONS

### Issues

To encourage voluntary improvements in agricultural water use efficiency, three groups of issues must be successfully addressed.

1. Adequate information and educational opportunities must be readily available to irrigators, and research must be continued. How difficult is it for irrigators to obtain this information? Is it presented in a manner that is clear and persuasive? Are there adequate data for evaluating applications for water right changes in terms of adverse effects upon other water users? Is improving irrigation technologies and practices receiving adequate priority in the competition for agricultural research dollars?
2. Funding assistance may be necessary for those wishing to improve irrigation efficiency. Are existing programs capable of meeting future demands for funding? Are the kinds and levels of support adequate? Should the state Water Development Program give special consideration to irrigation efficiency-improving proposals? Are other sources of funding available, particularly for the rehabilitation and betterment of aging irrigation projects?
3. Laws clarifying who owns the right to salvaged water must be enacted to provide clear incentives for more efficient use. But when an irrigator increases efficiency, how will the amount of water salvaged be determined? Will it include water that otherwise would have been return flows? How will other water users be protected from adverse effects? Should restrictions be placed on how the saved water can be used?

### Recommendations Adopted by the State Water Plan Advisory Council

In response to these issues, the following recommendations have been adopted:

1. The adequacy and effectiveness of existing information and research programs should be evaluated. Information should be provided to the state's irrigation districts and other organized irrigation associations on the availability of technical and financial assistance for improving irrigation efficiency. Further, these entities should be informed of their option under state law for the use of salvaged water.
2. Support for federal programs providing financial and other local level assistance to irrigators should be maintained. Special consideration should be given in the state Water Development Program for projects that would improve the efficiency of existing irrigation systems. Funds from the federal Pick-Sloan Missouri Basin Program should be allocated for use in the rehabilitation and betterment of irrigation projects.
3. The law should clearly provide that if an irrigator salvages water, he maintains the right to use the water. However, salvaged water must be defined to include only water that has not been available for reuse by other water users.

### Preliminary Recommendations Deleted by the State Water Plan Advisory Council

Many of the preliminary recommendations in the earlier draft of this plan section have been deleted because they are more directly related to the Instream Flow Protection section of the state water plan. These include the recommendations to allow the change and transfer of a consumptive water right to an instream flow use; to allow temporary emergency exemptions for water right changes; and to allow the leasing of private water rights. The preliminary recommendation to adopt rules governing enforcement of the waste statute has also been deleted. The preliminary recommendation to publish brochures or other information on basin closure, abandonment of water rights, water right enforcement, and water right changes and transfers were deleted from this plan section. The Council recommended that a public education effort on Montana water law should be undertaken, but as a general function of the state water planning process. Finally, the preliminary recommendation to create an Irrigation Efficiency Task Force was deleted.

## PLAN IMPLEMENTATION

### Legislative Action

To provide effective financial support, the legislature should adopt a resolution urging Congress to authorize and

appropriate funds from the Pick-Sloan Missouri Basin Program for the rehabilitation of irrigation projects. Such funding can be justified as compensation for water development projects promised to Montana under the 1944 Flood Control Act, but never received.

Legislation also should be passed that clarifies the rights of water users to salvaged water. Such legislation should carefully define "salvaged water" to include only the saved water that otherwise would have become consumed or unusable for other existing appropriators. The use of salvaged water for a different purpose, in a different place, from a different point of diversion, or from a different source of storage would require a change in water right in accordance with Montana law. A time period could be established within which the salvaged water must be put to use before the right to it will be considered abandoned.

#### **Administrative Action**

To improve education and research on irrigation efficiency, the DNRC, in cooperation with the Montana Cooperative Extension Service and the U.S. Soil Conservation Service, should evaluate the effectiveness of existing research and public education programs. A report should be prepared to the State Water Plan Advisory Council that sets

forth recommendations for any improvements in these programs.

The state's irrigation districts and other organized agricultural water user groups should be informed of available technical and financial assistance for improving irrigation efficiency. They should also be informed of the opportunity to use salvaged water if the legislation recommended above is enacted.

To assure continued federal government support for improving agricultural water use efficiency, the DNRC should continue to monitor and support federal funding for programs or projects that improve agricultural water use. In addition, the Water Development Program should give special consideration to project proposals that improve the efficiency of existing irrigation projects. The Governor's Office and the DNRC should also pursue all administrative and intergovernmental channels available to obtain Pick-Sloan funding for irrigation project rehabilitation.

#### **Financial Requirements and Funding Strategies**

It is anticipated that the administrative actions can be accomplished with current levels of funding.

#### **Time Schedule**

<b>Activity</b>	<b>Responsibility</b>	<b>Deadline</b>
<b>A. Development and Implementation Tasks</b>		
1. Draft Legislation	DNRC	January 1989
2. Enact Legislation	Legislature	April 1989
3. Contact irrigation districts and water users' associations	DNRC	May 1989
4. Complete evaluation report on irrigation efficiency information and research	DNRC	September 1989
<b>B. Ongoing Tasks</b>		
1. Rank irrigation efficiency project proposals to the Water Development Program	DNRC	
2. Monitor and support federal funding, including Pick-Sloan Program Funding	DNRC/Governor's Office	



# **MONTANA WATER PLAN Management Section**

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**1988**

## **Subsection: Instream Flow Protection**

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## INTRODUCTION

Water uses may be differentiated on the basis of whether they involve withdrawing water from a source of supply. Offstream uses divert water from a natural watercourse. This withdrawn water is then either used and returned to the watercourse or completely consumed. By contrast, instream uses maintain a specified level of flow in the natural watercourse.

The allocation of water in Montana has traditionally focused on the important task of satisfying offstream uses for domestic and commercial purposes, irrigated agriculture, industry, and mining. While these offstream uses remain critical to the growth and development of the state, there has been an increasing demand to leave water in the stream, unavailable for offstream diversion below a specified level, for fish, wildlife, recreation, and water quality. Montana law (Section 85-1-101(5), MCA) provides that "The water resources of the state must be protected and conserved to assure adequate supplies for public recreational purposes and for the conservation of wildlife and aquatic life." In addition, Section 75-5-101(1), MCA states that "It is the public policy of this state to conserve water by protecting, maintaining, and improving the quality and potability of water for public water supplies, wildlife, fish and aquatic life, agriculture, industry, recreation, and other beneficial uses."

Based on these and other statutory policies, natural resource management agencies are taking steps to protect instream flows through a variety of programs and practices. The purpose of this plan component is to identify the issues involved with maintaining and enhancing instream flows, and to present recommendations for resolving them.

## BACKGROUND

In 1969, the state took its first steps to statutorily allocate water for instream use. The Legislature established so-called "Murphy Rights" on the unappropriated waters of twelve "blue ribbon" trout streams to maintain stream flows necessary for the preservation of fish and wildlife habitat (Section 89-801(2), RCM, 1947). In 1973, state efforts were expanded with the enactment of the Montana Water Use Act, which not only provided an opportunity to reserve water for future diversionary and consumptive uses, but also for maintaining instream flows (Section 85-2-316, MCA). To date, instream reservations have been established only in the Yellowstone River Basin. Several other streams have received instream flow protection pursuant to Section 85-2-223, MCA, which allows the

Montana Department of Fish, Wildlife and Parks to represent the public in adjudication proceedings for purposes of documenting public recreational uses of water established prior to 1973. Instream flows are also maintained on several streams by releasing water from reservoirs during critical times of the year. Finally, the Department of Natural Resources and Conservation (DNRC) may condition water use permits for large appropriations on the basis of reasonable use criteria which include the protection of instream flows (Section 85-2-311(2)(c), MCA).

In addition to state efforts to protect instream resources, federal agencies and tribal governments have also taken steps to ensure the maintenance of instream flows. The Wild and Scenic Rivers Act (16 U.S.C. 127) has been used to protect instream resources on the North, South, and Middle Forks of the Flathead River, and on one reach of the Missouri River. Federal land management agencies are studying the possibility of adding rivers to the wild and scenic river system, thereby protecting additional instream resources. Through its special use permitting process, the U.S. Forest Service also protects instream flows by regulating access to developers seeking to divert water within the national forests (43 U.S.C. 1761-1771 (1982)). The federal reserved water rights doctrine may give federal resource management agencies and tribal governments another mechanism to manage instream resources. Finally, tribal governments, such as the Confederated Salish and Kootenai Tribes of the Flathead Reservation, are claiming aboriginal fishing rights to protect instream flows under their respective treaties with the United States.

Although the state of Montana has made significant progress in protecting instream flows, some of the existing programs and practices need refinement if they are to be effective. In certain cases, new legal and institutional mechanisms also may be needed to enhance instream resources.

## STATE WATER PLAN POLICY STATEMENT

Instream flows are an important use of water, and mechanisms should be developed and refined to protect and enhance instream resources. However, instream flow protection activities must not adversely affect existing water rights and should be weighed and balanced against alternative future uses of water.

# ISSUES AND RECOMMENDATIONS

## Issues

Four issues need to be addressed with respect to instream flow protection. They are:

1. Inadequate consideration of instream flow values in the water use permitting process.
2. Insecurity of instream water reservations.
3. Need for enhancement of instream resources in dewatered basins.
4. Need for research on instream resource management decisions.

## Recommendations Adopted by the State Water Plan Advisory Council

### 1. Permitting Process

The existing criteria for issuing a water use permit, as outlined in Section 85-2-311, MCA, may not adequately provide for the consideration of instream flow values. It is not clear whether the water permitting process allows for the consideration of instream flow values other than when instream flow water rights have been established. To date, many streams in Montana with important instream values do not have the necessary protection of an instream flow right. Water permits for new consumptive use continue to be granted before instream flow rights are established. Consequently, in certain areas of Montana, instream resources are subjected to further depletions.

One recommendation on this issue is to promote more timely acquisition of instream flow reservations by assigning applicants a priority date at the time of application (instead of several years later when final reservation decisions are made). Under this approach a "base" priority date would also be established for all reservants at the time the first correct and complete application is submitted for any given stream reach. Once such an application is accepted, all qualified applicants with an interest in the stream (including those needing water for offstream purposes) would have the opportunity to submit competing applications within a specified time period and receive the same base priority date. In making its final decision on the applications, the Board of Natural Resources and Conservation (BNRC) would also weigh and balance the reservation requests against water use permits granted since the base priority date. The BNRC could subordinate reservations to

water use permits if the purpose of the reservations is not substantially impaired.

Another approach to address this issue is to incorporate a provision into Section 85-2-311(1), MCA allowing water users to object to new water use permits and changes of water rights on the basis of potential adverse effects on public health. The State Water Plan Advisory Council is not currently recommending this approach, but wishes to receive public comment on the idea. The opportunity to object could include any group or individual who depends on a minimum streamflow to maintain water quality for domestic uses, or may be limited to those with a water quality discharge permit. Any group or individual objecting would assume the burden to show how and why the proposed permit would have adverse public health effects.

### 2. Security Of Instream Reservations

The current reservation process may not provide adequate security to instream reservations. If the BNRC finds that the total amount of an instream flow reservation is not needed to fulfill its purpose, and a qualified applicant can show that its need outweighs the need of the instream reservation holder, the excess water may be reallocated to the competing applicant (Section 85-2-316(11), MCA). Such actions may not occur more than once every five years. Moreover, all reservations are to be reviewed at least once every ten years, and if the objectives of the reservation are not being met, the Board may extend, revoke, or modify the reservation (Section 85-2-311(10), MCA).

The recommended solution to this issue is to evaluate the relative security of instream flow reservations after the BNRC completes its review of the Yellowstone River reservations in 1988. This strategy is recommended because it is difficult to evaluate the security of instream reservations, and thus determine what action is needed, without first going through the process of making a ten-year review. The evaluation would identify and assess all the problems associated with the security of instream reservations.

### 3. Enhancing Instream Flows

Instream resources are often threatened in streams that are subject to regular or periodic low flow conditions. The issue here is not how to maintain existing flow levels, but how to increase or enhance the flow levels in certain streams.

The first recommendation to address this issue is to allow public entities to lease water rights from offstream or

consumptive uses for purposes of protecting instream flows in important stream reaches. This opportunity is entirely voluntary and would not jeopardize existing offstream water rights. It would result in the temporary transfer of an offstream water right to enhance instream flows during critical low flow periods. Under the lease agreement, the offstream water user would still hold the water right and be compensated for leaving water in the stream during certain years.

A second recommendation is to support public entities in purchasing or leasing water stored in reservoirs above dewatered streams and in revising the operating procedures on such reservoirs. In addition, the feasibility of new storage projects to enhance instream resources should be assessed. Finally, cooperative solutions at the local level, such as irrigation scheduling, are supported.

#### 4. Research

To improve the management of instream resources, research is needed to evaluate:

- a. The effect of return flows on the maintenance and enhancement of instream resources.
- b. Instream flow quantification methods to determine if existing methods result in an inappropriate amount of water for instream resources.
- c. The physical availability of water to meet the demands for instream resource protection.

#### **Preliminary Recommendations Deleted by the State Water Plan Advisory Council**

Several of the preliminary recommendations in the instream flow plan section were deleted by the State Water Plan Advisory Council. First, the preliminary recommendation to allow public entities to object to new water use permits and changes of waters on the basis of potential adverse impacts on fish and wildlife resources, public recreational opportunities, and public health has been deleted.

Second, the preliminary recommendation to remove the 50 percent cap on the amount of water that can be reserved for instream uses has also been deleted. Third, the preliminary recommendations to allow the purchase and emergency transfer of offstream water rights for instream uses have been deleted. Finally, the preliminary recommendations to conduct research on (1) new methods to quantify instream flows necessary to maintain recreation, scenic,

and aesthetic values; and (2) the feasibility of inter-basin transfers and groundwater sources as alternative ways to enhance instream resources have also been deleted.

## **PLAN IMPLEMENTATION**

### **Legislative Action**

The legislature will have to revise Section 85-2-316(9), MCA to allow the BNRC to establish a base priority date for all reservants at the time the first correct and complete application is submitted for a particular stream reach; to define the time limit within which competing applications must be submitted; and to allow the Board to subordinate reservations to water use permits granted since the base priority date.

The legislature would also have to enact a statute to allow the voluntary leasing of water from offstream uses to instream uses. Some of the statutory modifications that may be needed include changing the definition of "appropriate" in Section 85-2-102(1), MCA and clarifying the change statute in Section 85-2-402(2)(b), MCA. It may also require a modification or clarification in the abandonment statute in Section 85-2-404, MCA.

### **Administrative Action**

To determine the relative security of instream flow reservations, the DNRC will, in cooperation with the Instream Flow Technical Advisory Committee, evaluate both the five-year and ten-year review processes after the BNRC completes the Yellowstone River reservation review. The DNRC will prepare a brief report for the State Water Plan Advisory Council (SWPAC) outlining the options and recommendations for addressing this problem.

To facilitate research on the three areas outlined above, the DNRC will work in cooperation with the Water Resources Research Center (WRRC) at Montana State University. The focus of this cooperative effort will be: (1) to identify leading researchers in the topic areas; (2) to survey the current state of research in each of the areas; (3) to consult with resource management agencies and water users to identify research needs; and (4) to outline research strategies, including financial requirements and sources of funding. Research proposals in these three areas will receive a high priority by the Research Center for funding. Periodical "progress reports" will be made to the SWPAC.

To assess the feasibility of new storage projects to enhance instream flows in dewatered basins, this issue should be incorporated into a state water plan section devoted exclusively to water storage projects.

### Financial Requirements and Funding Strategies

Funding may be necessary to conduct research on the three areas outlined above. Periodic progress reports to the SWPAC will outline the financial requirements and funding strategies for research.

#### Time Schedule

Activity	Responsibility	Deadline
<b>A. Development and Implementation Tasks</b>		
1. Draft legislation	DNRC	January 1989
2. Enact legislation	Legislature	April 1989
3. Evaluate security of instream reservations	DNRC	June 1989
<b>B. Ongoing Tasks</b>		
1. Reservoir management and cooperative solutions	DFWP, DNRC, others	
2. Research	DNRC, WRRC	



# MONTANA WATER PLAN

## Management Section

**REVISED DRAFT**

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### Subsection: Water Information System

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## INTRODUCTION

Information on the quantity, quality, distribution, and allocation of Montana's water resources provides a foundation for sound planning and management decisions. Under Montana law, the Montana Department of Natural Resources and Conservation (DNRC) has a mandate to "gather from any source reliable information relating to Montana's water resources and prepare therefrom a continuing comprehensive inventory of the water resources of the state (Section 85-1-203(1), MCA). Moreover, DNRC is required "in cooperation with other state agencies, institutions, colleges, and universities to establish and maintain a centralized and efficient water resources data management system sufficient to make available and readily accessible, in a usable format, to state agencies and other interested persons, information on the state's water resources, out-of-state water resources that affect the state, existing and potential uses, and existing and potential demands" (Section 85-2-112(4), MCA).

Since 1986, the DNRC has cooperated with the Natural Resource Information System (NRIS), a program of the Montana State Library, in developing a comprehensive water resources data management system. Known as the Montana Water Information System (MWIS), the system is designed to serve as a clearinghouse for all water data sources and users. Developed under the guidance of representatives from several state and federal water management agencies, MWIS does not duplicate the efforts of these organizations, but coordinates information exchanges among state, federal, and private water users and managers.

## BACKGROUND

Given the wide variety of water uses in the state of Montana, it is not surprising that there are several organizations involved in collecting and maintaining many different types of water resource information. DNRC, the Department of State Lands, the Department of Health and Environmental Sciences, and the Department of Fish, Wildlife and Parks all have active programs that involve the collection and use of water quantity or quality data. There is also a vigorous program related to the development of a water rights data system at DNRC. The Statewide Groundwater Information Center located at the Montana Bureau of Mines in Butte serves as a storage and retrieval facility for groundwater data. In Bozeman, the Surface Water Information Center of the Water Resources Center at Montana State University serves as a data repository for water-related research conducted in the university system.

On the federal level, agencies such as the U.S. Geological Survey, the Soil Conservation Service, the U. S. Forest Service, the Environmental Protection Agency, the Bureau of Land Management, and the Bureau of Reclamation are active in the water data management area. Finally, there are a number of private-sector consulting firms and resource development companies whose activities often include the collection of water data.

Each organization typically collects water-related information for its own purposes and, for a variety of reasons, this often results in a duplication of efforts. First, there is often a large amount of data being collected and maintained in a variety of formats, ranging from manual systems to extensive computer data bases. In many cases, the structure or content of the data bases may be incompatible, and thus it may be more efficient for an agency to collect new data rather than convert existing data to a format it can use. Second, because there are no standards for collecting and maintaining water-related information, there is often a question as to the reliability and usability of existing data. Finally, it is often more efficient to collect new data than to spend time trying to find out which organization has the needed information.

The Montana Water Information System was developed to help eliminate the duplication of data management efforts and to facilitate access to needed information. The first step in developing the program was to form a Water Resources Data Management System Advisory Committee. Composed of representatives from several state water data collection and management agencies, the committee provided policy guidance in designing a water data management system under the NRIS program. After meeting several times in 1986, the committee concluded that a new, centralized data system that ties all users into a single information base would be too costly to implement, too difficult to design for all uses, and, given the diverse needs of users, too complex for all users to operate. Instead, the Committee recommended developing a central access point to all the various data sources in the state. In other words, the MWIS program does not serve as a central data storage facility, but rather as a means to identify sources of important data and then coordinate access to those sources. This decentralized data base strategy enables each agency to continue managing its data to meet its own specific needs, and allows for maximum sharing of water data among participating agencies, as well as facilitating centralized data collection for specific issues or basins.

The objectives of the MWIS program are: (1) to determine the water data storage and retrieval needs of Montana data users; (2) to design a water data storage and retrieval system that meets user needs in Montana; (3) to establish



a central point of contact and to coordinate quick and efficient access to existing sources of water information for any particular geographic area of the state; (4) to design and promote a quality control system to ensure the usefulness of the data; and (5) to identify potential and existing duplicative data collection efforts for the purposes of reducing or eliminating such efforts and reducing the resultant costs.

To achieve these objectives, the following activities are currently underway and scheduled for completion by June 1989: (1) developing a data base on water resources information sources in the state; (2) accessing other data bases; (3) designing quality control criteria to ensure the compatibility of data management activities; and (4) surveying other state water information management systems. Once these initial activities have been completed, the MWIS program will be maintained and refined as advances in data management technology occur.

## **STATE WATER PLAN POLICY STATEMENT**

A comprehensive water information system is needed to improve the management of Montana's water resources by promoting coordination among water managers and users, as well as eliminating duplication of effort in the collection, storage, and retrieval of water-related information.

## **ISSUE AND RECOMMENDATION**

### **Issue**

The basic issue regarding water data management is: What type of information management system will best meet the needs of water resource decision makers while responding to the legislative mandate for an efficient water data management program?

### **Recommendation Adopted by the State Water Plan Advisory Council**

Sustaining the ongoing MWIS program is recommended as the most appropriate approach to managing Montana's water resource data. This program serves the diverse needs of water data users by providing a central access point to decentralized data bases. It eliminates the duplication of effort by enabling each agency to continue managing its own data to meet its specific needs while allowing for the maximum sharing of water data among participating agencies. The existing program also improves the efficiency

and effectiveness of water management activities by identifying and disseminating water-related information in a timely and efficient manner.

MWIS also facilitates the use of such state-of-the-art information management technology as a Geographic Information System. Using such a system, information can be assimilated and presented in a variety of formats, from technical reports to maps, as needed in regulatory, management, planning, and research decision making. Given the different needs of various water data users, this type of system is widely recognized as the most efficient and cost-effective approach to developing a comprehensive, integrative water data management system.

### **Preliminary Recommendations Deleted by the State Water Plan Advisory Council**

None of the preliminary recommendations in this plan section were deleted by the State Water Plan Advisory Council.

## **PLAN IMPLEMENTATION**

### **Legislative Action**

The legislature would not need to revise or adopt legislation to authorize the development of a water data management system. However, it is critical that the legislature provide the financial support needed to maintain, refine, and enhance the existing MWIS program.

### **Administrative Action**

Several administrative actions are necessary to implement the recommended option. These actions are described according to the functions of the MWIS staff and the MWIS Advisory Committee.

#### **A. MWIS Staff**

1. Complete the current program activities and produce a report that summarizes the findings;
2. Maintain a central access point to data for water information users;
3. Maintain the staff needed to ensure the proper operation of the MWIS program;
4. Receive direction from the MWIS Advisory Committee whose function is to assist the program staff with the development and operation of the data management program;

5. Seek funding for additional microcomputers (with modems) to accommodate increased public use of MWIS by allowing more than one user to access MWIS at a given time, as well as allowing remote access to the system.
6. Cross-train MWIS, NRIS, and State Library staffs to familiarize them with the various data bases being accessed by MWIS, thus enhancing program capabilities to respond to data requests.
7. Provide training to system users to encourage remote and independent use of MWIS.
8. Develop a system for tracking current and anticipated data collection efforts in Montana to enhance information sharing among data users and to discourage duplication of effort.

#### B. MWIS Advisory Committee

1. Expand the advisory committee to include experts in Geographic Information System(s) and natural resources management from state and federal agencies;
  2. Provide guidance in identifying computer needs, developing data standards, and identifying funding sources for the acquisition of selected types of data;
  3. Prioritize what data are needed to meet the most critical water resource issues facing Montana; and
4. Coordinate the development and utilization of new data management tools, such as a Geographic Information System.

#### Financial Requirements and Funding Strategies

It is estimated that funding in the amount of \$100,000 is needed during the 1990-1991 biennium to maintain and further develop the MWIS program. This funding is being sought through four basic approaches:

1. Negotiate interagency agreements to provide specific data management services for compensation, approximately \$25,000 was acquired during fiscal years 1988 and 1989 and additional agreements are expected in the future.
2. Apply for grants and seek non-state funding. For the 1990-1991 biennium, NRIS has applied for a Renewable Resources Development Grant of \$99,806. Approximately 36 percent of the grant, or \$35,930, would be allocated to MWIS. NRIS has also applied for a Water Development Grant of \$45,510.
3. Request general funds in the event that grants are not available. Although a request for such funds was not made for the 1990-1991 biennium, the director of the Budget Office has indicated he will consider a late request if grant funding is not obtained.
4. Investigate the feasibility of relying on user fees to partially fund the activities of MWIS.

## **Time Schedule**

	<b>Activity</b>	<b>Responsibility</b>	<b>Deadline</b>
<b>A.</b>	<b>Development and Implementation Tasks</b>		
	1. Design MWIS program	MWIS/Advisory Committee	August 1988
	2. Establish central point of contact	MWIS	September 1988
	3. Expand Advisory Committee	MWIS/Advisory Committee	December 1988
	4. Design quality control criteria	MWIS/Advisory Committee	June 1989
	5. Train State Library and NRIS staff	MWIS	March 1990
	6. Provide on-line and remote access to MWIS	MWIS	October 1990
	7. Train users of MWIS	MWIS	June 1991
	8. Develop system for tracking data collection efforts	MWIS	October 1991
<b>B.</b>	<b>Ongoing Tasks</b>		
	1. Determine water data needs and sources	MWIS/Advisory Committee	
	2. Access data bases	MWIS	
	3. Promote quality control criteria	MWIS	
	4. Coordinate the development and utilization of data management tools	MWIS/Advisory Committee	



# AN UPDATE ON THE STATE WATER PLAN

WATER RESOURCES DIVISION • MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

Many of you are now aware that a state water plan is being developed for Montana. During late summer of this year, the Department of Natural Resources and Conservation (DNRC) held a series of public meetings across the state to discuss the preliminary recommendations for the plan. More than 2,000 persons attended the 9 public meetings, and many offered comments. Nearly 160 letters on the plan were also submitted to DNRC.

The public meetings were held to obtain comments on the issues covered in the draft plan sections and the recommendations involved. These preliminary drafts did not represent "final" recommendations to the legislature or to any other decision-making body. They were simply proposals, accessible to the public and other interested parties, and open to revision and change. In fact, many of the preliminary recommendations have been changed, based in large part on your comments made at the public meetings and in your letters.

## First Steps in the Process

In recent years, the Montana Legislature has shown considerable interest in developing "a progressive program for the conservation, development, and utilization of the state's water resources." According to the legislature, this program, or plan, should "propose the most effective means by which these water resources may be applied for the benefit of the people, with due consideration of alternative uses and combination of uses." In 1987, DNRC, the agency responsible for coordinating the plan, responded with a report to the legislature that outlined a process for developing the plan.

Policy guidance on the plan comes from the State Water Plan Advisory Council, which was appointed by the Governor. The Council consists of ten members, including: two state senators and two state representatives; the directors of three state departments; a representative of the Governor's Office; and two private citizens—a water law expert and an irrigation project manager. Two of the legislators on the Council are also members of the legislature's Water Policy Committee.

In the early stages of plan development, issues are identified and analyzed. Ways to address the issues are developed with input from the public, state and federal agencies, and interest groups. These issues and recommendations are then written into preliminary drafts of the state water plan. Four sections of the plan were at this stage of development when they were presented at this summer's public meetings. Each section addressed a different issue: water information; federal hydropower licensing and state water rights; instream flow protection; and agricultural water use efficiency. In time, the plan will encompass many more issues—some of statewide significance and others that are specific to an individual river basin. The issues are likely to be as diverse and wide-ranging as drought management, water storage, interstate water allocation, and ground water management.

## The Public Enters the Process

The preliminary recommendations presented at the public meetings had been drafted by the State Water Plan Advisory Council and by several Technical Advisory Committees composed of people from agencies

and interest groups affected by the issues at hand. The meetings gave the public an opportunity to suggest changes, recommend other approaches to the issues, and voice concerns that may have been overlooked. From the outset, the State Water Plan Advisory Council hoped that the public would help shape and improve the state water plan. As it turned out, those of you who attended the meetings and wrote letters showed a strong consensus of opinion on a number of concerns.

Many people felt that their existing water rights would be threatened by the recommended actions, particularly regarding instream flow protection and agricultural water use efficiency. However, none of the plan recommendations are designed to take away existing water rights, and the State Water Plan Advisory Council strongly supports the protection of existing water rights.

The most frequent comment at the meetings addressed the need to develop new water storage facilities to resolve our water supply problems. In response, a future plan section will be solely devoted to this issue. More than half of the letters received expressed support for protecting instream flow resources. Changes were made in the instream flow section to incorporate suggestions from a cross-section of interests.

## The Revised Recommendations

A number of persons commenting on the plan were concerned that the planning process and the preliminary recommendations were cast in stone and not subject to change. However, as promised at the public meetings, the State Water Plan Advisory Council carefully considered the public comments and made several important changes.

A number of individuals suggested that the process was moving too quickly and there should be more time for public involvement. The Council therefore recommended that the planning cycle for complex issues be extended from one year to two. Further, it was decided that there be more public involvement throughout the planning process. Finally, the Council recommended that there be an effort to provide water users with more information on Montana water law and its administration.

The Council did not modify either of the recommendations to continue developing a water information system or to change the way of dealing with the federal hydropower relicensing process. However, these are still just preliminary drafts and may be changed after further public discussion. Many of the recommendations in the plan sections on instream flow and agricultural water use efficiency were modified or deleted. Several new recommendations have been added. These changes are shown below. Further changes may be made to incorporate comments from three upcoming public hearings scheduled for early December.

## Instream Flow Protection

### Deleted recommendations

1. To allow public entities to object to new water use permits and changes in water use on the basis of potential adverse impacts on

fish and wildlife resources, public recreational opportunities, and public health.

2. To remove the 50 percent cap on the amount of water that can be reserved for instream uses.
3. To allow the purchase and emergency transfer of offstream water rights for instream uses.
4. To conduct research on (a) new methods to quantify the instream flows needed to maintain recreation, scenic, and aesthetic values; and (b) the feasibility of inter-basin transfers and ground water sources as alternative ways to enhance instream resources.

#### Adopted recommendations (open to comment and change)

1. To promote more timely acquisition of instream flow reservations by assigning a priority date at the time any reservation application is received. At the same time, the Board of Natural Resources and Conservation would be allowed to subordinate reservations to intervening water use permits.
2. To evaluate the relative security of instream flow reservations after the ten-year review of the Yellowstone River reservations in 1988.
3. To allow public entities to lease water rights from offstream uses for purposes of instream flows in important stream reaches. The Council emphasized that this opportunity is to be entirely voluntary and would not jeopardize existing offstream water rights. It would result in the temporary transfer of an offstream water right to enhance flows during critical, low flow periods. Under a lease agreement, the offstream water user would still hold the water right and be compensated for not using water during low flow periods.
4. To support public entities in purchasing or leasing water stored in reservoirs above dewatered streams, and to support them in revising the operating procedures on such reservoirs. The Council also recommended assessing the feasibility of new storage projects to enhance instream resources, and supporting cooperative solutions to instream flow problems at the local level, such as irrigation scheduling.
5. To evaluate (a) the effect of return flows on the maintenance and enhancement of instream resources, (b) instream flow quantification methods to determine if existing methods result in an inappropriate amount of water for instream resources, and (c) the physical availability of water to meet the demands for instream resource protection.

The public is also encouraged to comment on the option of allowing water users to object to new water use permits and changes of water rights solely on the basis of potential adverse effects on public health. The Council is currently weighing two possible approaches: that the opportunity to object could include anyone who depends on a minimum streamflow to maintain water quality for domestic uses; or that objections may be limited to those with a water quality discharge permit. Any group or individual objecting would assume the burden of showing how and why the new permit would adversely affect any public health values.

## **Agricultural Water Use Efficiency**

#### Deleted recommendations

1. To publicize innovations in the way water rights are changed and transferred.
2. To allow the change and transfer of a private consumptive water right

to a non-consumptive, instream flow right (considered in the instream flow section).

3. To allow temporary, emergency exemptions to the requirement for department approval of voluntary water right changes (considered in the instream flow section).
4. To clarify that appropriators may lease water to other individuals, corporations, or public agencies subject to compliance with the change approval requirements of law (considered in the instream flow section).
5. To adopt appropriate rules on the enforcement of the waste statute.

Finally, the entire agricultural water use efficiency plan section has been rewritten to more closely focus on the potential agricultural benefits of increasing water use efficiency. As with all revised plan sections, the subsection on options has been deleted. Thus, the "tax" and "water bank" options in the water use efficiency plan section have been deleted.

#### Adopted recommendations (open to comment and change)

1. To evaluate the effectiveness of existing research, public information, and training efforts to improve agricultural water use efficiency.
2. To provide the state's irrigation districts and other organized agricultural water use associations with information on available technical and financial assistance for improving irrigation efficiency.
3. To continue to monitor and support federal funding of programs and projects that improve agricultural water use efficiency.
4. To give special consideration to project proposals under the state's Water Development Program that improve the water use efficiency of existing agricultural projects.
5. That the legislature should adopt a resolution urging Congress to appropriate funds from the Pick-Sloan Missouri Basin Program to help rehabilitate existing irrigation projects.
6. To draft legislation clarifying who has the right to salvaged (conserved) water. Such legislation should include a statement of intent requiring the adoption of rules governing the processing and review of change applications so that any change in a water right will not result in more water being consumed. Such legislation should also better assure that the rights of existing water users are protected.

## **The Next Steps**

Three public hearings will be held in Missoula, Helena, and Billings in early December to take public comments on the revised recommendations. A notice of the public hearings will be published in local newspapers several weeks before the hearings. Individuals attending the first series of public meetings will be mailed a copy of the revised plan sections along with times and locations of the hearings. Copies of the revised plan sections will be available from local water rights field offices and libraries. Members of the State Water Plan Advisory Council will be on hand to hear the public comments.

After the public hearings, the State Water Plan Advisory Council will meet to make final recommendations on the four issues being addressed this year. The Board of Natural Resources and Conservation will then receive the final recommendations in early January, and copies of the plan recommendations will also be given to the legislature as required by law.

DEPARTMENT OF NATURAL RESOURCES  
AND CONSERVATION



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October 31, 1988

As Chairman of the State Water Plan Advisory Council, I wish to thank you for taking an interest in the development of Montana's water plan. We have received a number of excellent comments on the first four sections of the plan, both at the nine public meetings and in writing. In light of that comment, the Advisory Council changed many of its preliminary recommendations. The revised recommendations, as well as those which were deleted, are outlined in the enclosed revisions of the plan sections.

In addition to changing many of the preliminary recommendations in the plan sections, the Water Plan Advisory Council also changed the planning process itself. The process will now extend for two years on complex water resource issues and provide more opportunity for public involvement.

The SWPAC will be holding three public hearings to take comment on the revised plan sections. The hearings will be at 7:00 p.m. on:

- \* December 12, 1988, in Billings at the Petro Theatre, Eastern Montana College;
- \* December 13, 1988, in Missoula, at the University Center Ballroom, University of Montana;
- \* December 14, 1988, in Helena at the Lower Commons, Carroll College.

Written comments on the revised plan sections will also be accepted, but must be received by December 5, 1988.

Once again, thank you for your interest in Montana's water plan.

Sincerely,

A handwritten signature in cursive script that reads "Larry Fasbender".

Larry Fasbender, Chairman  
State Water Plan Advisory Council

Enclosures

